IN THE CLAIMS:

This listing replaces all previous listing of claims:

1. (Canceled)

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Canceled)

7. (Canceled)

8. (Canceled)

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Previously Presented) The method according to claim 21, wherein the size of the absolute reference section and the local sections comprises 3 to 7 data points per dimensional direction.

13. (Previously Presented) The method according to claim 21, wherein the local sections and/or the absolute reference section are deformed according to a local preferred dip and

preferred dip direction.

14. (Canceled)

15. (Previously Presented) The method according to claim 13, wherein during the selection of the absolute reference section, a search is carried out for the dip and dip direction exhibiting the largest similarity among the trace portions belonging to the absolute reference section, whereby afterwards in the determination of the similarity between the absolute reference section and local sections, the specific relative dip between the absolute reference section and the local section conforming to the largest similarity is then determined in each case.

16. (Previously Presented) The method according to claim 13, wherein in addition to the data volume with the similarity values, a data volume with the determined dip values and a further data volume with the determined values of the dip direction are formed.

17. (Previously Presented) The method according to claim 21, wherein the absolute reference section is supplied by a well

with ascertained lithological information.

18. (Previously Presented) The method according to claim 17, wherein the absolute reference section is generated synthetically by convolving down a pre-selected 3-dimensional acoustic impedance distribution from the relevant well log with a representative wavelet.

19. (Previously Presented) The method according to claim 17, wherein the absolute reference section is formed synthetically with the help of seismic 3-D modeling techniques from a geological model determined by lithological, petrophysical and/or structural parameters.

20. (Currently Amended) The method according to claim 21, wherein several different absolute reference sections, given by locations of drilled holes, are compared with the local sections each in separate similarity analyses, and thus several similarity values are calculated for each data point.

21. (Previously Presented) A method for processing a seismic 3-D measurement data set comprising a multitude of traces, each trace having a sequence of data points provided with amplitude values or acoustic impedances, which comprises the

steps of:

(a) selecting an absolute reference section at a predetermined location and depth which comprises neighboring trace portions of several seismic traces;

(b) determining the similarity between the selected absolute reference section and local sections of seismic data from the measurement data set and allocating a similarity value based on the determined similarity to each data point; and

(c) creating a volume of data corresponding with the measurement data set using the similarity value which has been determined and allocated to each data point as the attribute.

22. (Previously Presented) The method according to claim 13, wherein the method comprises before the step of determining the similarity between the absolute reference section and said local section, the step of searching for a specific dip and dip direction for the absolute reference section and each local section which results in the largest similarity of the trace portions from the absolute reference section and each local section, whereby the search comprises an iterative determination of the similarity of neighboring trace portions that are shifted

with respect to each other according to dip and dip direction.

23. (Previously Presented) The method according to claim 21, wherein said step of determining similarity includes determining the similarity between several different absolute reference sections which are compared with the local sections, and thus several similarity values are calculated for each data point.

Please add the following claim:

24. (New) A method for processing a seismic 3?D measurement data set comprising a multitude of traces, each trace having a sequence of data points provided with amplitude values or acoustic impedances, which consists of the following steps:

(a) selecting an absolute reference section at a predetermined location and depth which comprises neighboring trace portions of several seismic traces;

(b) determining the similarity between said selected absolute reference section, and each of a plurality of local sections of seismic data taken from the measurement data set;

(c) creating a new data set by assigning the calculated similarity values as attributes to the center points of each of the local sections, thus creating a volume of data of similarity attributes corresponding to the measurement data set with the determined similarity values assigned to each data point in said new data set.